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Analysis of Factors Affecting Resilience among Breast Cancer Patients

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Abstract-- *Patients undergoing chemotherapy must have a good resilience to be able to rise to face the problems caused by the physical and psychological side effects of chemotherapy. Resilience is influenced by many factors. The study aims to analyze the factors related to resilience among breast cancer patients, including age, time of illness duration, cycle of chemotherapy, social support and family support. This study used observational analytic method with cross-sectional approach. The population in this research comprised breast cancer patients who received 2- 6 sessions of chemotherapy at Army Hospital Level II of dr. Soepraoen Malang. The total sample in this study had 62 patients taken by using a purposive sampling technique. Data collection was conducted by using questionnaires. The data were analyzed through a univariate and linear regression test with a significance level of* $\alpha \leq 0{,}05$*. The test result showed that out of the 5 independent variables two significantly influenced patient's resilience, namely family support and social support. Social support is the variable that has the greatest influence on the resilience of breast cancer patients. So, nurses need to pay attention to providing social support in nursing services in breast cancer patients to improve their resilience.*

Keywords-- *Breast cancer, Resilience*

I. INTRODUCTION

The most frequently diagnosed cancer among women is breast cancer that has become the leading cause of cancer death in women worldwide [1]. The North American Association of Central Cancer Registries in 2017 said that in Asia the incidence of breast cancer was around 907 events per 100,000 people [2]. Whereas in Indonesia breast cancer is the most common type of cancer treated in hospitals[3]. Breast cancer patients often suffer from anxiety, depression and posttraumatic stress disorders [4]. Resilience can help patients adapt well to their psychological problem but most cancer patients have low-level resilience [4]. Interview results showed in RST Dr. Soepraoen Malang from 10 patients, 90% had a desire not to continue chemotherapy because of the difficulties experienced while undergoing it. They cannot recover from the traumatic process of their chemotherapy treatment because they have a low level of resilience. Research also proved that poor resilience will lead to poor quality of life.

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Chemotherapy is the most widely used therapy for breast cancer patients. It can affect physical and psychological conditions. It became an emotional stressor and caused non-compliance with therapy in cancer patients. The physical effects of chemotherapy are diverse. As many as 80% of patients undergoing chemotherapy experience gastrointestinal disorders such as diarrhea, constipation, nausea, vomiting; hair loss (alopecia) was experienced by as many as 50% of patients, weight loss (86.4%), malnutrition (37.9%), weakness (15.7%) and sensory neuropathy (35%) [5][6]. The most common psychological effects were anxiety and depression. Breast cancer patients undergoing chemotherapy must have the ability to adapt and deal with the physical and psychosocial effects of chemotherapy. One important thing that must be done is the ability of resilience to overcome the psychological effects of cancer [7]. It is therefore important for patients to have good resilience to reduce emotional distress and improve their ability to adapt to the long courses of chemotherapy treatment.

There is no consensus on an operational definition of resilience. It is a good adaptive process in the face of adversity, trauma, threats, or other major stressors which means recovery from a difficult experience [2]. Individuals who have high levels of resilience can deal with stressors, while low levels of resilience will affect personal development. Patients who have high levels of resilience will have positive psychological well-being[8]. Resilience is a protective factor for improving well-being, quality of life and post-traumatic stress disorders. It was evidenced as a multidimensional process containing a natural interaction of attributes such as self-reliance, optimism, and persevering embedded in human interconnectedness. A hierarchical analysis showed that this trait significantly predicted high levels of perceived growth and health-related quality of life in cancer patients. This effect was moderated by positive-acceptance-coping. The study also found that negative-affect coping had a direct effect on lowering health-related problems. Resilience has been found to improve a person's well-being as well as promote recovery from stressful situations. However, there are several theoretical assumptions and doubts about the relationship between resilience and post-traumatic growth[9]. However, the concept of resilience is still inconsistent which is influenced by various factors.

The literature review showed that the factors that influence resilience include age, family support, social support, anxiety and time duration of illness. Age will shape the perception and assessment of individuals in coping and rising to face problems[10]. Family function is defined as the degree to which a family operates as a unit to cope and adjust to stressors [9]. It may cause positive feelings in patients. Family support influences the dimensions of relationships with others and adaptation to the environment. Patients with good family support will have positive adaptability. Social networks can provide information about the disease and offer support to be more motivated and have good resilience to face problems [11].

Based on the information above, it is necessary to analyze the various factors that play a role in the resilience of breast cancer patients. The purpose of the study was to analyze factors that influence resilience in breast cancer. Five factors will be analyzed in this study, including age, time suffered from illness, family support, the cycle of chemotherapy, and social support.

II. METHODS

This type of research was an observational design with a cross-sectional approach [12]. Data retrieval was carried out from January until March 2019. The population comprised breast cancer patients aged 20-65 years old. The number of samples consisted of 62 people who attended chemotherapy in Dr. Soepraoen hospital East Java - Indonesia. The

sampling technique was purposive sampling. The researchers applied for ethical clearance first from the Research Ethical Committee of the Medical Faculty of the University of Brawijaya. Permission was asked from the director of Dr. Soepraoen Hospital Malang to provide a research permit recommendation. The permission was followed by the retrieval of the data that began with providing explanations and informed consent to the patients as the respondents. The data were collected using a questionnaire. The respondents provided an assessment of themselves by giving an appropriate score. The data was checked, entered into the SPSS program and analyzed.

III. RESULT

The data obtained is numerical. The following described the results of the descriptive analysis on the Distribution of the Respondents' Characteristic and each variable. It also shows the results of the bivariate analysis and the effect of factors (independent variables) on resilience.

Table 1. Distribution of respondents' characteristics

Characteristic	n	%
Education		
Elementary school	29	46.8
Junior high school	18	29.0
Senior high school	10	16.1
College	5	8.1
Occupation		
Working	50	80.6
Not working	12	19.4
Incorporated in the cancer online group		
Yes	1	1.0
No	61	99.0
Marital Status		
Married	55	88.7
Single	2	3.2
Widow	5	8.1
Residence		
Malang city	26	41.9
Outside of Malang city	36	58.1
Ever get cancer information from health workers		
Yes	44	71.0
No	16	29.0
Ever get chemotherapy from health workers		
Yes	51	82.3
No	11	17.7
Breast surgery		
Yes	40	64.5
No	22	35.5

Table 1 showed that most respondents' education level is elementary school, most of them are working and have been married. Most of them come from other cities or outside Malang city. They have been given education about cancer and chemotherapy from health works and most of them also had breast surgery.

Table 2. Descriptive analysis of the independent variables

Characteristic	n	Mean±SD	Min- Max

Age	62	48,89±8,08	30-62
Duration of illness	62	12,98±8,43	2-37
Cycle of chemotherapy	62	3,69±1,39	2-6
Social support	62	27,42±3,99	19-35
Family support	62	26,66±3,675	20-35

Table 2 showed that the majority of the respondents were in the adult age category, the average illness period was 12 months, they had gone through 3 cycles of chemotherapy, had sufficient social and family support.

Table 3. Descriptive analysis of resilience (dependent variables)

Characteristic	**n**	**Mean±SD**	**Min- Max**
Resilience	62	35.95±3.64	29-44

The respondents' average resilience is 35,95 or in the medium category

Table 4. Bivariate analysis of the variables

	Resilience	
Variable	**r**	**p-value**
Age	0.262	0.04
Duration of illness	0.102	0.432
Chemotherapy cycle	0.073	0.572
Family support	0.254	0.047
Social support	0.566	0.001

Based on the results of the bivariate test the variables significantly related to the resilience of breast cancer patients are age, family and social support.

The analysis results used to determine the influence of factors (independent variable) on resilience (dependent variable) can be identified based on the p value and B in Table 5.

Table 5. Multivariate analysis test results for resilience

		B	**Std. Error**	**P value**	**R Square**
1	(Constant)	13.140	4.113	.002	
	Age	.022	.047	.645	0.399
	Family support	.288	.101	.006	
	Social support	.513	.096	.000	
2	(Constant)	13.827	3.811	.001	0.396
	Family support	.291	.100	.005	
	Social support	.524	.092	.000	

Based on Table 5, the results of the analysis showed that the factor related to resilience was family support p- value 0,005 at alpha = 0,05 so it can be concluded that family support significantly influences the resilience. The second factor related to resilience was social support with p-value = 0.000 at alpha = 0.05, so it can be concluded that the social support factors significantly influence the resilience of breast cancer patients. It can be concluded that the greatest factor related

to resilience was social support with B=0.524. The results of the multivariate analysis, the equation can be arranged as: y=13.827 + 0.291 family support + 0.524 social support.

For the quality test of the model equation, the researcher used ANOVA resulting a p value=0.000 < alpha (0,05). It can be concluded that the equation is eligible to use. The test showed the value of R square is 0.396, it means that the equation obtained can explain resilience 39,6 % after controlled by other factors.

IV. DISCUSSION

Based on the results of the analysis, it is known that there are two factors related to the resilience of breast cancer patient. They are family support and social support. This study shows the family support received by patients is at moderate to high levels. Patients receive emotional support in the form of attention and affection, the family accompanies the respondent during chemotherapy and the family still respects the respondent even though his responsibilities are increasing because the respondent experiences limited activities during chemotherapy. This extends the period of care at home and adds family responsibilities. High family support can strengthen patients so they can accept their health conditions. Family support can accelerate the patient's recovery process and increase the patient's adjustment to treatment [14].

Family support is influenced by marriage status. This study shows that most respondents were married and living with their spouse. It is in line with research by [13]; he stated that married women have more family support because couples are the biggest source of support for a woman. The side effects of chemotherapy can affect intimacy with a partner. But intimacy can be rebuilt by spending more time together, good communication and sharing feelings. Support from family members can provide hope and feelings of trust to patients and can provide a reason for them to survive, enabling them to struggle with this disease and undergo treatment. In addition, the most important factor for patients is eliminating feelings of pessimism, helplessness and adjusting to the therapy undertaken. This is supported by [14] who explained that family support, especially emotional and instrumental support, has a significantly greater positive impact on individuals,. Family support can increase self-confidence and psychological adaptation. High family support will make someone optimistic about the treatment process. Emotional support makes patients feel valued even though they have changed their role in their family. Furthermore, financial support from the family can reduce one of the causes of stress. High family support makes patients able to accept the changes that occur and able to adapt in the family environment so they can have adaptive resilience to manage the problems caused by their disease and chemotherapy [14].

The results of this study indicate that the percentage of resilience with low levels experienced by respondents who underwent 2 sessions of chemotherapy increased in session 3. However, in sessions 4 and 5 the percentage of low resilience increased and decreased again in session 6. This occurs because of patient endurance in undergoing chemotherapy is fickle and can increase if the individual can pass the stressor well. Patients who were able to adapt during chemotherapy will show increased resilience. This is in line with the opinion of [15] who states that resilience is dynamic, depending on one's physical condition. Increase in resilience occurs if a person can adapt to a stressor by passing through the changes caused by it [16]. This is in accordance with [17] who explained that breast cancer patients who undergo chemotherapy will experience side effects such as hair loss, nausea, vomiting and fatigue. This will make the patient experience psychological stress, therefore high resilience is needed so that the patient can adapt to the stressor.

Another factor that can influence resilience is the level of education. The results of this study indicate that most respondents had primary school education level, but the resilience can show an increase because respondents have received information from health workers and got telephone access that can help them receive information related to their problems. Individuals who were able to accept change will have good personal development thereby increasing their readiness to deal with stressors[15]. Patients who were able to adapt and manage their stressors showed improvements in physical and psychological aspects [18].

The result of the test shows that the greatest factor influencing resilience is social support. Social support includes support from external resources namely all sectors of society consisting of friends, colleagues, and other organizations. Social support is the most effective source in overcoming and preventing factors that aggravate the disease. Social support makes individuals feel trusted, loved, respected, cared for and helped by the fulfillment of their needs by others [19]. High social support can strengthen patients, help them believe in themselves, adjust to their health conditions so as to reduce the negative psychological symptoms of chemotherapy[20]. Social support is positive and accessible affects her appraisal of a challenging situation as more manageable or less overwhelming, thus enhancing coping. Under circumstances such as breast cancer diagnosis in younger women, exploration of perceptions about the quality of social support, especially from a partner or other significant relationships may be critical to distress screening, psychosocial assessment, and appropriately targeted interventions [[19].

Factors affecting social support include education level and age. The respondents in this study mostly had primary school education. Information support is higher in individuals with high levels of education (high school and college). But it is not in line with the results of this study which shows that most respondents with low levels of education get high social support. This happens because respondents get information from health workers before chemotherapy is carried out. Social support is the factor that has the most influence on resilience. Social support can make individuals prepare themselves for the conditions they will face especially for breast cancer patients. Nurses must increase social support for patients undergoing chemotherapy, for example by forming online groups or self-help groups for breast cancer patients.

V. CONCLUSION

The research was conducted using 62 breast cancer patients that fulfilled the inclusion criteria. The average resilience of the respondent is 35,95 or in the medium category. The results show that the greatest factor influencing resilience is social support. So, nurses need to pay attention to providing social support in nursing services in breast cancer patients.

CONFLICT OF INTEREST

No conflict of interest has been declared.

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